

**Remarks**

Claims 8-13 and 16-18 are pending. Claims 14 and 15 are cancelled in this Response.

**Objection To The Drawings.**

The Specification has been amended to add part number 46 to the description of Fig. 1.

**Claim Rejections.**

Claims 8-13 and 16-18 were rejected under Section 103 as being obvious over Havemann (5059546) in view of Takahashi (6207976). The rejection of Claims 8-13 and 16-18 is based on the assertion that Takahashi teaches forming an emitter from a group III/IV semiconductor. This assertion is not correct. Takahashi teaches forming the emitter from a group III/V semiconductor.

"A lamination structure of the emitter layer 44 and emitter cap layer 45 forms a mesa structure over the base layer 43, and the partial upper surface of the base layer 43 is exposed around the emitter layer 44. *The emitter layer 44 ... is made of n-type InGaP* having an Si concentration of  $3 \times 10^{17} \text{ cm}^{-3}$ . *The emitter cap layer 45 is made of n-type GaAs* having an Si concentration of ...." Takahashi, column 12, lines 1-7 (emphasis added).

The passage in Takahashi cited by the Examiner, column 3, lines 45-49, describes an "intermediate layer" containing Ga (group III) and S (group VI). This intermediate layer, which is *not* an emitter or emitter layer, is shown in a hetero bipolar transistor (HBT) in Fig. 5 and described in the accompanying text in Takahashi at column 12, lines 9-41.

The Examiner has, therefore, failed to establish a prima facie case of obviousness as to Claims 8-13 and 16-18 and the rejection of those claims should be withdrawn.

The foregoing is believed to be a complete response to the outstanding office action.

Respectfully submitted,

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